common carrier traffic, we propose an exception to the rule to permit grandfathering of private operational fixed microwave systems providing common carrier service for their connecting facilities, or for CMRS providers that were formerly private land mobile radio service providers. We do not believe that such an exception would conflict with any other decisions the Commission has made concerning the differences between common carriers and non-common carriers.[127] We seek comment on this proposal and any alternatives thereto.[128]

2. Shared bands

39. Several frequency bands are used for TV Broadcast Auxiliary Services, Cable Relay Service (CARS), Private Land Mobile Radio Service, and Fixed Microwave Services. For example, Sections 74.644, 78.108, 101.143, and 101.803(b) set out minimum path lengths and appropriate power reductions for many of the same bands.[129] However, Section 101.803(b), which regulates LTTS, requires compliance with the technical rules provided in Parts 74 and 78 of our Rules, which are different from those contained in the Part 101 rules. In addition, we understand that some confusion exists concerning which technical standards govern LTTS when the Part 74 and 78 standards differ from or, in certain instances, conflict with Part 101. For instance, frequency tolerance[130] or EIRP conflicts appear at 2450-2483.5 MHz, 12700-13250 MHz, and 38600-40000 MHz. We believe that these situations can be addressed by either modifying Section 101.803(b) to state that where conflicts arise, the more restrictive rule will apply, or conforming the technical standards for all the rule parts.[131] We seek comment on which approach would provide the most clarity for affected licensees.

40. Also, the 2450-2483.5 MHz band is shared by Parts 74, 78, 90, and 101 services, and is subject to differing limitations on antenna requirements, channelization, bandwidth, and type acceptance. For example, fixed microwave users under Part 101 must coordinate their use with other fixed microwave users,[132] while broadcast auxiliary users must use local coordinators who do not coordinate

[127] *See generally id.*

[128] In addition, in the event we retain the general prohibition against POFS carriage of common carrier traffic, we propose to clarify Section 101.135(a), which states that entities may share their private systems with, or provide private carrier service to, "any eligible for licensing under *this part*, regardless of individual eligibility restrictions, provided that the communications being carried are permissible under § 101.603." 47 C.F.R. § 101.135(a) (emphasis added). This rule was incorporated directly from Part 94, so we believe that the reference to "this part" meant only POFS, and that the Commission did not intend to alter the distinction. *See Part 101 Order*, 11 FCC Rcd at 13467. In Part 101, however, "this part" also encompasses common carriers, so, if the prohibition is retained, we propose to clarify the rule to apply only to sharing with POFS eligibles.

[129] 47 C.F.R. §§ 74.644, 78.108, 101.143, 101.803(b).

[130] Frequency tolerance is the maximum permissible departure by the center frequency of the frequency band occupied by an emission from the assigned frequency or, by the characteristic frequency of an emission from the reference frequency. 47 C.F.R. § 101.3.

[131] We believe that these changes may also allow us to delete 47 C.F.R. § 101.807.

[132] 47 C.F.R. § 101.103.

with Part 101 users,[133] and Part 90 users are allowed uncoordinated use.[134] We seek comment on such inconsistencies regarding technical standards in shared bands, and on whether and how to resolve them.

3. Station authorization

41. Section 101.5(b) of the Commission's Rules provides information about which transmitters require authorizations.[135] It notes that a separate application must be filed for each DEMS Nodal Station, but no separate license is required for a DEMS User Station.[136] Similarly, we require a separate authorization for each MAS master station, but not for an MAS remote or mobile station.[137] Because the Rules do not clearly state this, however, we propose to amend Section 101.5(b) to state that MAS remote and mobile stations also do not require a separate authorization. We seek comment on this proposed change, and on whether any other rules need to be changed to effect this clarification.

4. Temporary and conditional authorizations

42. Section 101.31(a)(3)-(5) of the Commission's Rules requires licensees to provide certain technical information to the Commission regarding their conditional operations.[138] We propose to eliminate this requirement because we are not convinced that it continues to serve a regulatory purpose. We also propose to insert language in paragraph (b) of this section to specify that an application for authority to operate a fixed station at temporary locations must specify the precise geographic area within which the operation will be confined. The area specified must be defined as a radius of operation about a given state or states, latitude/longitude, or as a rectangular area bounded by upper and lower lines of latitude and longitude. This language was formerly in Section 101.13 of the Rules and should have been moved to another section when Section 101.13 was removed.[139]

43. Section 101.31(b)(1)(vii) provides that conditional authorization is granted only if the filed application does not "propose to operate . . . in the 21.2-23.6 GHz band with an [effective radiated power (ERP)] greater than 55 dBm pursuant to § 101.147(s)."[140] Our experience has shown that it is sometimes unclear to applicants whether conditional operation is allowed anywhere in the 21.2-23.6 GHz band, or only on the four frequencies listed in Section 101.147(s). We propose to amend Section 101.31(b)(vii) to

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[133] 47 C.F.R. § 74.604.

[134] 47 C.F.R. § 90.35.

[135] 47 C.F.R. § 101.5.

[136] 47 C.F.R. § 101.5(b).

[137] *See, e.g.*, Amendment of §§ 22.501(g)(2) and 94.65(a)(1) of the Rules and Regulations to Re-Channel the 900 MHz Multiple Address Frequencies, *Report and Order*, PR Docket No. 87-5, 3 FCC Rcd 1564, 1565 (1988).

[138] *See* 47 C.F.R. § 101.31(a)(3)-(5).

[139] C.F.R. § 101.13 (1998) was removed pursuant to the *ULS Proceeding*, 13 FCC Rcd.

[140] 47 C.F.R. § 101.31(b)(1)(vii) (formerly 47 C.F.R. § 101.31(e)(1)(vii)).

clarify that only the four frequencies listed in Section 101.147(s) are allocated for conditional operation.[141] With regard to other frequencies in the band, applicants must follow normal processing and await the Commission obtaining clearance from NTIA before operating.

44. Finally, we propose to make frequency bands 952.95-956.15 MHz and 956.55-959.75 MHz, which are designated for point-to-point use in Tables 9 through 11 of Section 101.147(b)(6),[142] available for conditional authorization under Section 101.31(b).[143] We are not proposing any other frequencies listed in these tables because they require Interdepartment Radio Advisory Committee (IRAC) coordination with NTIA. We seek comment on these proposed changes.

5. Transmitter frequency tolerance and power limitations

45. We propose to clarify and correct the frequency tolerance table in Section 101.107(a)[144] by: 1) consolidating the separate columns for all fixed and base stations, mobile stations over three watts, and mobile stations three watts or less, because the frequency tolerances for these three categories are the same; 2) deleting footnote 2 because it applies to equipment which is over forty years old; 3) deleting footnote 5 because the same information is contained in footnote 7; and 4) correcting certain errors in the listing of bands and tolerances. We also propose to amend the EIRP table in Section 101.113(a)[145] to divide the 10,550-10,680 MHz band into two separate bands: 10,550-10,600 MHz with a maximum power of 55 dBW and 10,600-10,680 MHz with a maximum power of 40 dBW, to be consistent with US footnote 265 of the Table of Frequency Allocations in Section 2.106.[146] We seek comment on the accuracy of these proposed changes, their compliance with the Act, and their effect on licensees.

6. Directional antennas below 932.5 MHz

46. Section 101.115(b), the substance of which was carried over from Part 21,[147] sets forth technical requirements for stations operating below 932.5 MHz that are required to use directional

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[141] *See* Amendment of Part 94 of the Commission's Rules and Regulations to Facilitate Operation of Low Power, Limited Coverage Systems in the 22.0-23.6 GHz, *First Report and Order*, PR Docket No. 79-337, 81 FCC 2d 140 (1980); Amendment of Part 94 of the Commission's Rules and Regulations to Facilitate Operation of Low Power, Limited Coverage Systems in the 22.0-23.6 GHz, *Memorandum Opinion and Order*, General Docket No. 79-337, 87 FCC 2d 1090 (1981); Amendment of Part 94 of the Commission's Rules and Regulations to Facilitate Operation of Low Power, Limited Coverage Systems in the 22.0-23.6 GHz, *Second Report and Order*, General Docket No. 79-337, 94 FCC 2d 32 (1983).

[142] 47 C.F.R. § 101.147(b)(6).

[143] 47 C.F.R. 101.31(b) (formerly 47 C.F.R. § 101.31(e)).

[144] 47 C.F.R. § 101.107(a).

[145] 47 C.F.R. § 101.113(a).

[146] 47 C.F.R. § 2.106.

[147] *See* 47 C.F.R. § 21.108(b) (1995).

antennas.[148] However, the only Part 101 frequencies below 932.5 MHz are MAS frequencies,[149] and these stations are not required to use directional antennas.[150] Because it appears that Section 101.115(b) no longer applies to identifiable frequencies, we conclude that this provision no longer serves a regulatory purpose and propose to delete it on that basis.

7. Antenna polarization

47. The last sentence of Section 101.117 states, "Unless otherwise allowed, only linear polarization (horizontal or vertical) shall be used."[151] We propose to limit this restriction to LMDS operators within 20 kilometers of their service area boundary.[152] We also propose to delete the words "horizontal or vertical," because strict horizontal or vertical polarization is improbable for most of the billboard passive reflectors that we authorize. Due to reflections in the non-vertical/horizontal planes of incidence, we propose to clarify our rules to allow systems with rotated linear polarization. Rotated linear polarization is usually expressed at an angle up to +/- 89.9 degrees from vertical. We seek comment on these proposed changes.

8. Changes in regulatory status

48. In the *Part 101 Order*, the Commission stated that a private operational fixed licensee can change to a common carrier by filing appropriate tariff information as required by Part 61 and a license application form (FCC Form 601), and that no filing fee will be required.[153] We believe it would be helpful to codify this procedure for effecting a status change. We seek comment on this conclusion.

9. Frequencies

49. We propose minor clarifications and streamlining of Section 101.147, which sets out the frequencies available for fixed microwave services. It is our understanding that some applicants have been confused by which parts of the section cover MAS and which cover point-to-point operations. Thus, we propose to amend the introductory paragraph of Section 101.147(b) to clarify that it covers both, and to clarify which subsections and tables pertain to each category. We also propose to update the references throughout the Section 101.147(b) from "Domestic Public Land Mobile Radio Service" to

[148] 47 C.F.R. § 101.115(b).

[149] *See* 47 C.F.R. § 101.101.

[150] *See* 47 C.F.R. § 101.115(c) n.2.

[151] 47 C.F.R. § 101.117.

[152] *See* Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, CC Docket No. 92-297, *Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rulemaking,* 12 FCC Rcd 12545, 12666 (1997).

[153] *Part 101 Order*, 11 FCC Rcd at 13468.

"Public Mobile Services."[154] Sections 101.147(k) and 101.803(e) list the 6525-6575 MHz frequency band with a grandfathered provision which expired in 1968.[155] We no longer see any reason to retain this language. We seek comment on these proposed changes.

10. Frequency tolerance

50. We propose to amend Section 101.507 to provide the frequency tolerance of ±0.0001% for DEMS Nodal Stations and ±0.0003% for DEMS User Stations in the 10,550-10,680 MHz band. It appears that this was inadvertently omitted in prior rule changes. We seek comment on this proposal.

11. Stations at temporary fixed locations

51. Section 101.815(a)(1) permits temporary operation of LTTS stations for six months, but prohibits temporary operation of stations for services that are initially known to be of longer than six months' duration.[156] The rule allows for short-term needs or for testing purposes, but prevents applicants from using the temporary provisions to avoid having to wait for regular processing of their application for permanent authority. We propose to eliminate the prohibition of temporary operation of stations for services known to be of longer than six months' duration, and thus allow applicants to use the temporary fixed locations without restrictions provided they still file for permanent authority for stations that remain longer than six months. We believe that our processing time is sufficiently expeditious that applicants will not seek any benefit from using a temporary location to avoid regular processing delays. We further believe that broadening the scope of use of temporary fixed locations could result in a reduction of requests for special temporary authority which might otherwise be needed. We seek comment on this proposal.

12. Use of 10.7 - 11.7 GHz frequencies for final link

52. Section 101.603(b)(3) of our Rules incorporates the prohibition, formerly found in Section 94.9(b)(3), against using POFS frequencies (except 6,425-6,525 MHz, 18,142-18,580 MHz, or above 21,200 MHz) for the final radio frequency link in the chain of transmission of program material to CATV, MDS, or MATV systems.[157] CAI requests that we eliminate this restriction.[158] It posits that we have created an "unnecessary burden" on wireless cable operators by prohibiting them from "using the 11 GHz band to connect programming headends or satellite receive facilities with their main transmitters."[159] Alcatel argues that using bands other than 11 GHz, or using alternative transmission

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[154] *See* Revision and Update of Part 22 of the Public Mobile Radio Service Rules, *Report and Order*, CC Docket No. 80-57, 95 FCC 2d 769 (1983).

[155] 47 C.F.R. §§ 101.147(k), 101.803(e).

[156] 47 C.F.R. § 101.815(a)(1).

[157] *See* 47 C.F.R. §101.603(b)(3).

[158] CAI Petition at 2-4.

[159] *Id.* at 2.

media, for "final link" video transmission would be excessively expensive.[160] CAI and Alcatel argue that the limitation is at odds with our goal of regulatory symmetry between POFS licensees and common carriers.[161] AAR opposes CAI's request, on the grounds that video transmission – particularly multi-channel video transmission – is highly spectrum-intensive, and allowing "final link" use of the 11 GHz band would seriously reduce the amount of 11 GHz spectrum available to incumbent licensees in the 2 GHz band that must relocate to accommodate emerging technologies.[162] We also note that, since CAI filed its petition, a petition for rule making was filed that proposes to make 12 GHz frequencies available for the delivery of video programming, including "final link" use.[163] The Commission assigned a rulemaking number to this petition, RM-9257, and released a *Notice of Proposed Rulemaking* on July 14, 1999.[164]

53. We seek comment on whether the CAI proposal is in the public interest. Commenters should address whether granting CAI's request would adversely affect the Commission's efforts to ensure that spectrum is made available for the essential services offered by displaced 2 GHz licensees. Commenters are encouraged to provide specific quantitative data regarding the impact of the removal of the final link restriction on spectrum availability for displaced 2 GHz licensees, and the relative cost of using other bands or transmission media for the final link of video transmission.[165]

13. LMDS technical rules

54. With the advent of commencement of LMDS operations, we are concerned that some Part 101 technical rules may not be fully consistent with the types of services permitted and envisioned by our LMDS rules. Specifically, we seek comment on whether the Part 101 emission mask requirement in certain circumstances may be too severe for LMDS. Section 101.111 sets forth the required attenuation; subsections (a)(2)(ii) and (iii) provide as follows for operating frequencies above 15 GHz:

> (ii) For operating frequencies above 15 GHz, in any 1 MHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 250 percent of the authorized bandwidth: As specified by the following equation but in no event less than 11 decibels:
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> $$A = 11 + 0.4(P - 50) + 10 \text{ Log}_{10} B.$$

[160]Alcatel Comments at 7.

[161]CAI Petition at 4; Alcatel Comments at 7.

[162]*See* AAR Opposition at 5.

[163]Petition for Rulemaking of OpTel, Inc. (filed April 1, 1998).

[164]*See* Petition for Rulemaking to Amend Eligibility Requirements in Part 78 Regarding 12 GHz Cable Television Relay Service, *Notice of Proposed Rulemaking,* FCC 99-166, Docket 99-250 (Jul. 14, 1999).

[165]*See* 47 U.S.C. § 101.109. This section contains a table of frequency bands with allowable bandwidths. Above 3700 MHz, the table lists 20 frequency bands which allow bandwidths of 10 MHz or more other than the 11 GHz band.

(Attenuation greater than 56 decibels is not required.)

(iii) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 + 10 Log_{10} (mean output power in watts) decibels, or 80 decibels, whichever is the lesser attenuation.[166]

We understand that LMDS transmitters may be being manufactured for a spectrum block rather than for discrete frequencies as point-to-point microwave systems are, and LMDS transmitters are filtered as wide as the spectrum block. We are concerned that attempting to mask each discrete frequency in accordance with Part 101 may present insurmountable logistical problems for LMDS licensees. In this connection, we seek comment on how to eliminate or mitigate such problems if they exist.

55. In order to provide LMDS operators maximum flexibility, the Commission's technical standards allow using a bandwidth up to 850 MHz in the 27.50-28.35 GHz band.[167] If a manufacturer designs a transmitter to operate with a bandwidth of 10 MHz, and the maximum bandwidth (850 MHz) from the table in Section 101.109 of the Commission's Rules is used in the equation above, this interpretation may create an unreasonable emission mask. We seek comment on whether the table in Section 101.109 or the approach in Section 101.111 of the Commission's Rules should be changed to indicate that LMDS equipment manufacturers can specify and use the actual bandwidth of the designed transmitter.

56. The method of calculating an emission mask in Section 101.111 as a function of power works well for high powered transmitters. However, the same method of calculation for low powered transmitters can result in out-of-band emissions that may be unnecessarily low. For instance, Bosch Telecom, Inc. (Bosch), a manufacturer of telecommunications equipment, suggests adopting a minimum limit for out-of-band emissions of -13 dBm.[168] We seek comment on this suggestion. We also seek comment on whether there are other technical rules applicable to LMDS which should be changed and the reasons therefor. Further, we ask commenters whether other Part 101 services require unique technical rules. If so, commenters should discuss the substance of such rules and the reasons therefor.

57. In addition, we note that Section 101.139 indicates that point-to-multipoint transmitters in the 39 GHz, LMDS and DEMS services must be of a type that has been certificated by the Commission, but most other fixed point-to-point microwave transmitters are subject to the less burdensome[169] verification procedure.[170] Digital Microwave Corporation (Digital), a manufacturer of

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[166]47 C.F.R. § 101.111(a)(2)(ii), (iii). P = percent removed from the carrier frequency, and B = authorized bandwidth in MHz.

[167]*See* 47 U.S.C. § 101.109(c).

[168]Letter from David E. Hilliard and Thomas S. Dombrowsky, Jr. (Engineering Advisor) of Wiley, Rein & Fielding, counsel for Bosch, to Thomas J. Sugrue, Chief, Wireless Telecommunications Bureau, at 3-5 (Jan. 27, 1999).

[169]*Compare* 47 C.F.R. § 2.952 *with* 47 C.F.R. § 2.1053.

[170]47 C.F.R. § 101.139(a).

fixed microwave equipment, contends that LMDS and DEMS transmitters are comparable to other fixed point-to-point microwave transmitters, and proposes that they also be subject to verification rather than certification.[171] We tentatively agree that the equipment is sufficiently similar to permit the marketing of fixed point-to-point and point-to-multipoint transmitters for the 39 GHz, LMDS, and DEMS bands that have been verified by the manufacturer or importer, rather than certificated by the Commission. We seek comment on this proposal.

B. TIA Petition for Rulemaking

58. On March 6, 1998, TIA filed a Petition for Rulemaking which focuses on permitting conditional authorization in the 21.2-23.6 GHz band (the 23 GHz band), making the 23 GHz band more accessible to fixed service users, and modifying antenna standards for the 10 GHz and 23 GHz bands to allow for more hops and longer paths.[172] TIA argues that such revisions will make the 23 GHz band more attractive to fixed microwave users, which in turn will help alleviate overcrowding in other bands.[173] TIA also proposes minor corrections to the Table of Maximum Authorized Bandwidth in Part 101, Subparts C and J.[174] The petition was placed on Public Notice on February 5, 1999.[175] Eight comments and two reply comments were received, primarily from microwave equipment manufacturers and service providers, and generally in support of TIA's proposals.[176]

1. Conditional authorization

59. TIA proposes that we permit conditional licensing in the 23 GHz band. The band is allocated to both government and non-government users, so licensing on these frequencies must be coordinated with NTIA. TIA argues that the current coordination process takes too long, discouraging licensees from using the 23 GHz band.[177] It proposes to protect government operations by means of the same procedure used for coordination among non-government users.[178] Specifically, a commercial frequency coordinator would send a prior coordination notice (PCN) to IRAC.[179] The federal

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[171]Digital Request for Partial Waiver of Section 101.139(a) (filed May 28, 1999).

[172]TIA also proposes rule changes to Part 74, Television Broadcast Auxiliary Service, to permit transport of digital transmissions over point-to-point microwave frequencies in that service, but these proposals are beyond the scope of this proceeding and will be handled in a separate proceeding.

[173]TIA Petition at 2-3; *see also* Alcatel Comments at 1.

[174]TIA Petition at 25.

[175]Public Notice, Report No. 2309 (rel. Feb. 5, 1999).

[176]A list of commenters is provided in Appendix A.

[177]TIA Petition at 12-13.

[178]*Id.* at 12 n.18 (citing 47 C.F.R. § 101.103(d)). TIA also proposes establishing exclusion areas around sensitive Government operations, where conditional licensing would not be permitted. *Id.* at 13.

[179]*Id.* at 13. In the alternative, TIA suggests that the PCN could be sent to each affected Government agency

government agencies, through IRAC, would have thirty days to examine the application and notify the commercial coordinator of potential interference problems.[180] If no response is made, coordination would be deemed to have been completed, and an application could be submitted to the Commission and operation could commence.[181] If interference problems were identified, but were resolved between the commercial and government frequency coordinators during the thirty-day period, then the operator could submit a license application to the Commission and begin operation.[182] If the identified interference problems remain after the thirty-day period, then conditional licensing would not be permitted and an operator would have to select alternative frequencies, or it would have to request resolution of the problem through the formal licensing process.[183] TIA recognizes that its plan can be adopted only if the Commission and NTIA reach an agreement consistent with the proposals.[184]

60. Alcatel supports the proposal, arguing that permitting more rapid delivery of services would encourage greater use of the 23 GHz band.[185] Digital and Harris Corporation (Harris) would support the proposal if the Commission and NTIA reached an agreement regarding conditional licensing in the 23 GHz band.[186] On the other hand, Teledesic LLC (Teledesic), a satellite operator, questions whether expanding conditional licensing in the 23 GHz band -- or otherwise encouraging rapid development of the band -- is appropriate, given that it is not clear whether replacement spectrum will be required for the relocation of incumbent fixed microwave users in the 18 GHz band.[187] TIA replies that making the 23 GHz band more attractive will reduce the use of the 18 GHz band, and make the 23 GHz band a more viable relocation band.[188]

61. As we noted in the *Memorandum Opinion and Order*, the Commission concluded in the *Part 101 Order* that conditional licensing should not be permitted in the 23 GHz band because use of these

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directly, rather than to IRAC. *Id.* at 14 n.21. Digital Microwave Corporation and Harris Corporation suggest omitting use of PCNs, and having the Commission transmit the 23 GHz application itself to IRAC. Digital Microwave Corporation Comments at 5; Harris Corporation Comments at 6.

[180]TIA Petition at 13.

[181]*Id.* at 14.

[182]*Id.*

[183]*Id.*

[184]*See id.* at 15.

[185]Alcatel Comments at 4-5.

[186]Digital Comments at 5; Harris Comments at 5.

[187]Teledesic Comments at 3-4 (discussing Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use, *Notice of Proposed Rulemaking*, IB Docket No. 98-172, 13 FCC Rcd 19923 (1998)).

[188]TIA Reply Comments at 8.

frequencies must be coordinated by the Commission with NTIA, and the two agencies did not have an agreement concerning conditional licensing on those frequencies.[189] The agencies have reached agreements concerning conditional licensing in other bands, but not regarding the 23 GHz band.[190] We agree with TIA that permitting conditional licensing absent such an agreement is inappropriate, and we will continue to work toward an agreement. Until such time, however, we decline to propose any rules changes for conditional licensing in the 23 GHz band. We seek comment on our approach.

2. Technical standards

62. When the 23 GHz rules were adopted, the Commission did not incorporate complete technical standards in order to afford the industry opportunity to develop. TIA proposes several changes to the 23 GHz technical rules that it contends will facilitate greater exploitation of the band.[191] We believe that the industry is now mature enough to incorporate complete standards, such as TIA has proposed.

a. Channel plan

63. Our rules do not specify a channel plan for the 23 GHz band.[192] TIA argues that a channel plan will make the band more efficient, and thus more attractive for short-haul fixed microwave service users.[193] TIA's proposed plan, as a general matter, is based upon the current industry standard 50 MHz channel plan, but, given the availability of more spectrally efficient digital fixed microwave service radios, it also includes narrow and wideband channels to provide flexibility and to increase the number of potential users.[194] Specifically, the plan consists of twenty-four pairs of 50 MHz channels, each subdivided into wideband channels (*i.e.*, one 40 MHz channel, one 30 MHz channel, two 20 MHz channels and five 10 MHz channels) and into narrowband channels (*i.e.*, ten 5 MHz channels and twenty

[189]*See supra*, ¶ 24 (citing *Part 101 Order*, 11 FCC Rcd at 13462-63). Conditional licensing is permitted on four frequencies in the band, provided that the ERP does not exceed 55 dBm. 47 C.F.R. §§ 101.31(b)(vii) (formerly 47 C.F.R. § 101.31(e)(vii)), 101.147(s); *see supra*, ¶ 24.

[190]*See* Reorganization and Revision of Parts 1, 2, 21 and 94 of the Rules to Establish a New Part 101 Governing Terrestrial Microwave Fixed Radio Services, *Order*, WT Docket No. 94-148, 13 FCC Rcd 4394 (WTB/OET 1998); Amendment of the Commission's Rules to Relocate the Digital Electronic Message Service From the 18 GHz Band to the 24 GHz Band and to Allocate the 24 GHz Band for Fixed Service, *Order*, ET Docket No. 97-99, 13 FCC Rcd 3581 (1997).

[191]TIA Petition at 15. In order to minimize any adverse impact that these new rules would have on licensees of existing systems and on equipment manufacturers, TIA proposes that the Commission establish an 18-month transition period before manufacturers would be required to meet the new standards, and a 24-month transition period before new installations would have to meet the new standards. *Id.* at 16 n.23. Under TIA's proposal, fixed microwave service stations applied for or licensed by the end of the transition period would be grandfathered indefinitely under the current rules, provided that they do not cause harmful interference to other licensees. *Id.*

[192]*Id.* at 16.

[193]*Id.*

[194]*Id.* at 17.

2.5 MHz channels).[195] The center 10 MHz channel in each 50 MHz block would have the same frequency as the associated 50 MHz channel, which would permit upgrades in channel capacity without a frequency change.[196] TIA states that no overlap would be created between the existing 50 MHz channels and the new channels, allowing for an orderly transition to the new plan without causing interference to existing systems; and that the plan would enhance flexibility and spectrum efficiency by avoiding the need to use 50 MHz channels for all needs above 20 MHz.[197] TIA also recommends reserving several portions of the 23 GHz band for narrowband channels, which could be used for wideband traffic only if all other wideband channels are blocked.[198] Finally, TIA proposes making the entire band available to common carrier and POFS users, instead of the current system of reserving half of the band for each.[199]

64. Alcatel supports these proposals, on the basis that implementation of a channel plan would promote efficiency, while flexibility would attract a broad range of users to the band.[200] Digital and Harris agree, and state that a standardized channel plan will facilitate the design and manufacture of 23 GHz equipment.[201] They also note that giving common carrier and POFS users access to the entire band is consistent with the consolidation of the rules into a single Part 101.[202]

65. We seek comment on TIA's proposals, their compliance with the Act, and their effect on licensees. We also note that the Commission routinely licenses duplex point-to-point private systems which use one channel for video and one channel for control where the control frequency is separated from the video frequency by 50 MHz.[203] These systems are typically used for surveillance or security systems. We seek comment on whether to continue to license these systems, and how TIA's proposed channel plan would affect these users.

b. Frequency tolerance

66. Our current rules specify the frequency tolerance for the 23 GHz band at 0.03%.[204] TIA

[195] *Id.*

[196] *Id.*

[197] *Id.* at 17-18.

[198] *Id.* at 18. The frequencies selected for narrowband channels are the highest numbered channels in the common carrier and POFS segments of the 23 GHz band, which TIA states are the least congested frequencies in the band since frequency planners tend to select the lowest numbered frequencies first. *Id.* at 18 n.28.

[199] *Id.* at 18 n.27.

[200] Alcatel Comments at 6.

[201] Digital Comments at 3; Harris Comments at 3.

[202] Digital Comments at 4; Harris Comments at 4-5.

[203] *See* 47 C.F.R. § 101.147(s).

[204] 47 C.F.R. § 101.107(a).

contends that when this standard was adopted most 23 GHz band radios used analog modulation techniques and were coordinated for the full 50 MHz channel bandwidth, but today most licensed radios are digital and occupy 75% or more of the channel bandwidth.[205] TIA states that, for these digital radios, the 0.03% frequency tolerance specification would allow excessive frequency drift into adjacent channels if the band is divided into 50, 40, 30, 20, 10, 5, and 2.5 MHz channels, and that this would cause spectrum inefficiency.[206] TIA recommends applying to the 23 GHz band the same 0.001% frequency tolerance standard that is used for the 18 GHz band (which is divided into narrowband channels comparable to those proposed for the 23 GHz band).[207] Alcatel, Digital, and Harris support this proposal.[208] No one opposed TIA's proposal. We seek comment on TIA's proposal, its compliance with the Act, and its effect on licensees.

c. Spectrum efficiency

67. TIA argues that the current lack of a spectrum efficiency requirement for the 23 GHz band impedes efficient utilization.[209] Our rules require a 1 bps/Hz spectrum efficiency rate for all frequency bands below 19.7 GHz and for DEMS.[210] TIA contends that this standard also is appropriate for the 23 GHz band (and for all bands below 25.25 GHz), because it would ensure that all proposed bandwidths are fully utilized and because the digital 18 GHz band radio models that likely would be retrofitted for 23 GHz band operation are designed to this standard.[211] Alcatel, Digital, and Harris agree.[212] No one opposed TIA's proposal. We seek comment on TIA's proposal.

d. Low power systems

68. TIA claims that the 23 GHz frequencies set aside for low power, limited coverage systems, such as perimeter surveillance applications and remote video monitoring, are severely congested.[213] Accordingly, TIA proposes designating an additional 200 MHz in the band for such operations, adjacent to the current low power band in the 21.8-22.0 GHz and 23.0-23.2 GHz band segments.[214] Digital,

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[205]TIA Petition at 18-19.

[206]*Id.* at 19.

[207]*Id.*

[208]Alcatel Comments at 6-7; Digital Comments at 3; Harris Comments at 3.

[209]TIA Petition at 19.

[210]47 C.F.R. § 101.141(a).

[211]TIA Petition at 20.

[212]Alcatel Comments at 7; Digital Comments at 3; Harris Comments at 3-4.

[213]TIA Petition at 20.

[214]*Id.* at 20-21. TIA would reserve these frequencies primarily for narrowband systems, but permit wideband systems also if no other appropriate frequencies are available. *Id.* at 21 & n.31.

Harris, and Teledesic support this proposal.[215] No one opposed TIA's proposal.

69. In addition, TIA states that the Part 101 requirements for these low power, limited coverage systems are not congruent with their operations and should be revised as follows:[216]

- Maximum Power Definition -- Change the maximum power from 55 dBm ERP[217] to 55 dBm EIRP, because the maximum power for fixed microwave service systems is expressed as EIRP, and ERP is appropriate for mobile, not fixed, services.[218]

- Frequency Tolerance -- Apply the proposed 0.001% frequency tolerance standard to all systems, including low power, limited systems, rather than the current 0.05% standard for such systems.[219]

- Special Showings -- Delete as no longer necessary the requirement that an applicant make a showing of need in order to be authorized to operate with a 50 MHz bandwidth or to have more than five hops in tandem.[220]

- Interference Criteria -- Use a uniform frequency coordination procedure for all services in the 23 GHz band, and thus delete the specific additional interference criteria for low power, limited coverage systems, which, according to TIA, typical radios already meet, anyway.[221]

Alcatel supports making the standards uniform for all 23 GHz band systems, because this will ensure more efficient use.[222] No one opposed TIA's proposal. We seek comment on TIA's proposals.

3. Antenna standards for the 23 GHz and 10 GHz bands

70. TIA states that many fixed microwave users need or prefer to employ small antennas because most potential antenna sites, such as rooftops, monopoles, and electrical transmission towers,

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[215]Digital Comments at 4-5; Harris Comments at 5; Teledesic Comments at 3.

[216]TIA Petition at 21-22.

[217]47 C.F.R. § 101.147(s)(1).

[218]ERP is a term of reference to dipole, yagi, or other base and mobile antennas, while EIRP refers to isotropic radiators such as parabolic microwave antennas.

[219]47 C.F.R. § 101.147(s)(3).

[220]47 C.F.R. § 101.147(s)(5), (6).

[221]47 C.F.R. § 101.147(s)(7).

[222]Alcatel Comments at 7; *see also* Digital Comments at 5; Harris Comments at 5.

cannot support large microwave dishes, due to either space limitations or aesthetic objections of homeowner associations or zoning boards.[223] Our rules, however, do not permit antennas smaller than 0.61 meters (2 feet) in diameter in the 23 GHz band, or 1.22 meters (4 feet) in diameter in the 10 GHz band.[224] TIA believes that the existing antenna size restrictions deter fixed microwave service use of these bands.[225] It recommends permitting 0.46-meter (18-inch) or 0.30 meter (1-foot) high performance antennas in the 23 GHz band, and 0.61-meter (2-foot) or 1.22-meter (4-foot) antennas in the 10 GHz band.[226]

71. To permit 0.46-meter (18-inch) or 0.30-meter (1-foot) diameter antennas in the 23 GHz band, which will accommodate what TIA expects will be an increased need for short (*i.e.*, one-to-two miles) microcell interconnect and LMDS infrastructure link point-to-point microwave paths, TIA recommends that the Commission take the following actions:[227]

- Change the minimum antenna gain from 38 dBi to 33.5 dBi.
- Change the maximum beamwidth from 2.2 to 3.3 degrees.
- Retain the same front-to-back ratios as the current Category A and Category B radiation standards, tighten the Category B front-to-back ratio, and reduce the sidelobe suppression requirements.[228]

72. To permit 0.61 kilometer (2-foot) antennas in the 10 GHz band, which would accommodate paths longer than 2.3 miles, TIA proposes that the Commission take the following actions:[229]

- Change the minimum antenna gain from 38 dBi to 33.5 dBi.[230]
- Change the maximum beamwidth from 3.4 to 3.5 degrees so that there would be a uniform beamwidth for all 10 GHz Band systems.

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[223]TIA Petition at 22.

[224]47 C.F.R. §§ 101.115, 101.147(s).

[225]TIA Petition at 22.

[226]*Id.* at 23.

[227]*Id.* at 23-24; TIA Reply Comments at 7.

[228]The 0.46-meter (18-inch) diameter antenna would qualify under Category A and the 0.30-meter (1-foot) diameter antennas would qualify under Category B. TIA Petition at 24.

[229]*Id.* at 24-25; TIA Reply Comments at 7.

[230]This is consistent with the Commission's recent decision regarding directional antennas. *See* Amendment of Parts 74, 78, 101 of the Commission's Rules to Adopt More Flexible Standards for Directional Microwave Antennas, *Report and Order*, ET Docket No. 96-35, 12 FCC Rcd 1016, 1035 (1997).

- Change the radiation standards for Category A and Category B to the same standards that applied for the 10.55-10.68 GHz band before June 1, 1997,[231] tighten the front-to-back ratio for Category B channels, and reduce the sidelobe suppression requirements.[232]

73. Alcatel, Andrew Corporation, Digital, and Harris support these proposals, because permitting smaller antennas will encourage greater use of the 23 GHz band.[233] AirTouch Communications, Inc. believes that the proposals strike a fair balance between spectrum efficiency and the practical problems of antenna deployment.[234] To the extent that implementation of TIA's suggestions would result in greater spectrum efficiency and effective use of the 23 GHz band, we believe that adoption of TIA's proposals which have the effect of allowing smaller antennas would further the public interest. We seek comment on TIA's proposals and their effect on licensees.

C. Balanced Budget Act of 1997

74. In addition to the foregoing technical issues, we also seek comment on the impact of the Balanced Budget Act on Part 101. In paragraph 11, *supra*, we discussed the Balanced Budget Act amendment to Section 309(j) which provides that all mutually exclusive applications for initial licenses or construction permits *shall* be auctioned, except licenses and construction permits for public safety radio services, digital television service for existing analog television licensees, and noncommercial educational radio and television stations. We also discussed Section 309(j)(6)(E) of the Communications Act which states that, in determining the auctionability of applications, the Commission has the "obligation in the public interest to continue to use engineering solutions, negotiation, threshold qualifications, service regulations, and other means to avoid mutual exclusivity in application and licensing proceedings." In another proceeding, we requested comment on how to implement the Balanced Budget Act of 1997 generally.[235] We sought comment on, *inter alia*, how the Balanced Budget Act's revision of our statutory auction authority affects our determination of which wireless services are potentially auctionable and our determinations of the appropriate licensing schemes for new and existing services.[236] We also requested comment on the scope of the exemption from competitive bidding for public safety radio services, and on what regulatory provisions could be established to ensure that frequencies assigned without auctions meet the statutory requirements for exemption.[237] We also stated, however, that we would continue to establish licensing schemes on a service-specific basis, in order to

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[231] *See* 47 C.F.R. § 101.115 (1996).

[232] These new radiation standards would permit use of a shrouded 3.7 kilometer (2-foot) high performance antenna to meet Category A specifications and an unshrouded 1.22 meter (4-foot) standard antenna to meet Category B specifications. TIA Petition at 25.

[233] Alcatel Comments at 7-8; Andrew Corporation Comments at 3; Digital Comments at 4; Harris Comments at 4.

[234] AirTouch Communications Comments at 2.

[235] *See BBA Notice*, FCC 99-52.

[236] *Id.*, ¶ 1.

[237] *Id.*

take into account the particular characteristics, purposes, and technologies of each service.[238]

1. Above 2 GHz microwave licensing

75. We believe that the microwave spectrum above 2 GHz which is not already licensed pursuant to auction procedures presents a special challenge to our reinvention efforts to find spectrum for emerging technologies because it is used for a wide variety of services ranging from the earliest and most traditional to the latest fixed microwave technologies. Currently, we license this spectrum by channel or channels and site-by-site. Applicants are responsible for coordinating interference issues prior to filing a license application. Therefore, under the current licensing scheme, mutually exclusive situations rarely, if ever, occur. In Part 101 licensing generally there are no discrete services as, for example, LMDS, MAS, or the 39 GHz band, but instead licensing is based on the specific use of specific frequencies.[239] The lower frequency bands are significantly encumbered, particularly in urban areas, and the relocation of 2 GHz microwave licensees into the 6 GHz and 11 GHz bands has further burdened this spectrum. Satellite interests also are allocated some of the spectrum above 2 GHz, and with the expansion of satellite services, options for those needing terrestrial microwave spectrum are shrinking.

76. While spectrum above 2 GHz is becoming scarcer, demand for it is growing. Microwave is used as the backbone infrastructure for cellular, PCS, and other CMRS providers, which are expanding rapidly. Microwave spectrum may also be used for fixed point-to-multipoint service backbone support, such as for LMDS. Finally, the spectrum above 2 GHz is fertile ground for advanced telecommunications applications.[240] These competing forces must be addressed in our effort to comply with the Congressional intent to ensure that spectrum is used for the purposes the public interest requires.

77. Accordingly, we seek comment on how we might modify Part 101 general licensing to ensure that it is consistent with our implementation of the Balanced Budget Act of 1997 in other proceedings. We seek comment on several options, discussed below, and we also seek additional options from commenters.

- Option I: Similar to the Commission's approach in the 39 GHz band proceeding, we could license microwave spectrum subject to Part 101 based on an appropriate channelization plan and geographic service area through the use of competitive bidding procedures to choose among mutually exclusive applications. Under this approach, incumbent licensees would retain primary status for their current licenses but could not expand their service areas without the consent of the appropriate geographic area licensee. Also, where spectrum is licensed on a geographic basis, prior coordination in the traditional manner outlined in Section 101.103(d)[241] is not always necessary. Instead, coordination between or among geographic licensees will require the licensees in each geographic area to develop

[238] *Id.*, ¶ 74.

[239] *See* Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans In a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, *Notice of Inquiry*, CC Docket 98-146, 13 FCC Rcd 15280, 15308 (1998).

[240] *See id.* at 15294-301.

[241] 47 C.F.R. § 101.103(d). This section specifies traditional coordination procedures for site-based facilities.

agreements with each other on how to utilize their spectrum, especially along the boundaries between areas and/or where there is line-of-sight into another area, to achieve the most efficient and effective use in each geographic area.

- Option II: Similar to the Commission's approach regarding PCS and incumbent 2 GHz microwave licensees, we could relocate licensees so that spectrum is free and clear for licensing by competitive bidding, using an appropriate channelization plan and geographic service area. Under this approach, a spectrum "home" for the relocated licensees would have to be identified.

- Option III: Similar to our action in the LMDS proceeding regarding 31 GHz band incumbent licensees, we could identify certain bands in which incumbents could retain co-primary status; and other bands in which incumbents would have secondary status vis-a-vis new licensees authorized pursuant to a licensing scheme based on a channelization plan and geographic service area, and assigned by competitive bidding procedures. These types of usage raise questions about how spectrum can be shared and whether two co-primary users can successfully share spectrum. We will not address specific sharing issues in this proceeding that are already under consideration elsewhere. However, we invite comment generally as to changes to our rules that could facilitate the technology to better enable sharing of the spectrum between terrestrial fixed and satellite services. Also, should we establish restrictions on whether the satellite earth stations should be located outside of major cities where microwave routes are most valuable, and whether auctions should determine which service is primary and which is secondary? The following are some examples of proposed sharing:

- One proposed reuse of existing Direct Broadcast Satellite (DBS) spectrum in the 12.2-12.7 GHz band is for terrestrial video use as outlined in the Broadwave Albany, L.L.C. waiver requests.[242] Broadwave seeks co-primary status authority to provide multichannel video programming, including the retransmission of local television broadcast signals, to approximately 212 markets throughout the United States. Broadwave also proposes to provide internet services to consumers in these various markets. We note that the 12.2-12.7 GHz band is the subject of an ongoing rulemaking proceeding[243] and was one of the bands listed in the International Bureau's Public Notice No. SPB-141, released on November 2, 1998, establishing a final cut-off date to file applications for non-geostationary satellite orbit fixed satellite service in the 12.2-12.7 GHz frequency band that may be mutually exclusive with previously filed applications of Skybridge, L.L.C. (Skybridge).

- Another situation is the proposed sharing of frequency bands between satellite users and fixed terrestrial systems. The Commission has several requests before it concerning the sharing of terrestrial spectrum with mobile satellite service (MSS) offerings for feeder links (*e.g.*, applications have been received from Constellation II in the 5091-5250 MHz and 6700-7075 MHz bands, from ICO in the 5150-5250 MHz band, from Iridium Macrocell in the 19.3-19.7 GHz and 29.1-29.5 GHz bands, and from Boeing in the 11.597-11.7 GHz band).[244]

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[242]*See* Wireless Telecommunications Bureau Seeks Comment on Broadwave Albany, L.L.C. *et al.* Requests for Waiver of Part 101 Rules, *Corrected Public Notice*, DA 99-494 (WTB rel. Mar. 11, 1999).

[243]*See* Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range and Amendment of the Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7 GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates, *Notice of Proposed Rulemaking*, ET Docket No. 98-206, 14 FCC Rcd 1131 (1998).

[244]*See* The Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band, IB

- Option IV: We could retain the current licensing approach utilizing a variety of channelization plans and site-by-site licensing, but establish new competitive bidding procedures to resolve mutually exclusive applications.

With respect to what auction rules would be needed, we propose to adhere to our general Part 1 competitive bidding rules,[245] but to address auction design and methodology on a service-by-service basis.[246]

78. The above options would require rules to address the statutory exemptions from auctionability,[247] for bidding credits, for appropriate eligibility, and for the appropriate channelization plan and geographic service area or areas to meet the licensing needs of entities seeking microwave spectrum. What size should the geographic service areas be? Should there be more than one size of geographic service area, and if so, what should they be? Should there be nationwide licenses available, or will combinatorial bidding, which allows bidders to place single bids for groups of licenses, satisfy the need for nationwide backbone systems?[248] What size should the channels subject to auction be? Should the channel plan differ by frequency band? Should licensees have the freedom to combine such channels and to engage in unlimited disaggregation? Should the channels be structured for broadband use, or should licensees desiring broadband spectrum be required to seek and combine two or more narrowband licenses? How should eligibility be structured? Should the Commission establish spectrum caps? Should the channel plan continue to provide separate spectrum blocks for private and common carrier licensees, or is this distinction no longer necessary in light of the consolidation of the service rules into a single Part 101 (*but see* discussion regarding exempt categories, *infra*)?

79. We also seek comment on the economic impact that the licensing options would have on licensees, on customers, and on the availability of communications services. Our policy is to construct a licensing scheme that permits the market to ensure that spectrum is used efficiently and effectively. We seek comment on how a new licensing scheme for general Part 101 spectrum might affect the current distribution of microwave spectrum. Would spectrum continue to be made available for advanced telecommunications services? What would be the effect on PCS, LMDS, and other new services? What would be the effect on the 2 GHz microwave incumbents who are relocating pursuant to PCS licensing? Would the cost of providing other services now reliant on spectrum above the 2 GHz bands for backbone support increase, and if so, what would be the effect of such a cost increase? Are alternatives to microwave links, such as satellite and fiber, able to accommodate any migration of demand from microwave spectrum? What are the relative costs of these alternatives?

2. Public safety exemption

Docket No. 99-81, *Notice of Proposed Rulemaking*, 14 FCC Rcd 4843 (1999).

[245] *See generally* Amendment of Part 1 of the Commission's Rules -- Competitive Bidding Procedures, *Third Report and Order and Second Further Notice of Proposed Rule Making*, 13 FCC Rcd 374 (1997).

[246] *BBA Notice*, 14 FCC Rcd at 5243 ¶ 74.

[247] 47 U.S.C. § 309(j)(1), (2) (as amended by Balanced Budget Act § 3002).

[248] *See id.*, ¶ 78.

80. The Balanced Budget Act exempted from the Commission's competitive bidding authority licenses and construction permits for "public safety radio services," which are defined in the statute to include "private internal radio services used by State and local governments and non-government entities and including emergency road services provided by not-for-profit organizations, that--(i) are used to protect the safety of life, health, or property; and (ii) are not made commercially available to the public."[249]

81. We invite comments on the following issues:

- Do any of the services licensed under Part 101 come within the Balanced Budget Act's definition of "public safety radio services"? Commenters are encouraged to submit quantitative information regarding: 1) how much of the use is by Public Safety Pool eligibles[250]; 2) how much is for services that meet the Balanced Budget Act's definition of "public safety radio services," but are not included in the Public Safety Pool; and 3) what future use will be. Should these two classes of public safety radio services be consolidated for purposes of allocating microwave spectrum, or kept separate? We particularly seek comment regarding the proper treatment of spectrum such as the frequencies between 2,450 MHz and 2,500 MHz, which currently are available for public safety use on a shared basis with other services.[251]

- In the general Balanced Budget Act proceeding, we sought comment on whether to designate certain radio services or classes of frequencies within certain services as "public safety radio services."[252] In this *Notice*, we specifically ask for comment on whether any Part 101 spectrum should be designated for public safety radio services, and, if such designation is warranted, how much spectrum should be set aside. How many spectrum blocks should there be, and how large should they be? Should separate blocks be set aside for traditional public safety services and other entities falling within the exemption, or should all auction-exempt services share spectrum? How should mutually exclusive applications be avoided or resolved?

- If spectrum is set aside, should incumbents be protected with primary status, allowed to remain with secondary status, or relocated? If incumbents are relocated, who should bear the cost?

3. Educational broadcaster exemption

82. The Balanced Budget Act exempted from the Commission's competitive bidding authority licenses and construction permits for "stations described in section 397(6) of this Act,"[253] which defines

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[249]47 U.S.C. § 309(j)(2)(A). *See, e.g.*, 47 C.F.R. Part 90, Subpart B; *see also* H.R. Conf. Rep. No. 105-217, 105th Cong., 1st Sess., 572 (1997) (*Conference Report*). In the *Conference Report* these changes are further elaborated.

[250]*See* 47 C.F.R. § 90.20.

[251]47 C.F.R. § 90.20(d)(73).

[252]*BBA Notice*, 14 FCC Rcd at 5224 ¶ 30.

[253]47 U.S.C. § 309(j)(2)(C).

"noncommercial educational broadcast station" and "public broadcast station" to mean "a television or radio broadcast station" that is "eligible to be licensed by the Commission as a noncommercial educational radio or television broadcast station and which is owned and operated by a public agency or nonprofit private foundation, corporation, or association,"[254] or "is owned and operated by a municipality and which transmits only noncommercial programs for education purposes."[255] We seek comment on whether LTTS or other Part 101 stations that are or may be used to transmit television material for noncommercial educational broadcast stations fall within this auction exemption. We previously have concluded, however, that the exemption does not include stations in the Instructional Television Fixed Service (ITFS), because the exemption does not include nonbroadcast services.[256] ITFS is a point-to-point or point-to-multipoint microwave service whose channels are allocated to educational organizations and are used primarily for the transmission of instructional, cultural, and other types of educational material not intended to be received by the general public.[257] Thus, any commenter advocating an exemption for any Part 101 services should distinguish those services from ITFS.

D. Forbearance and Regulatory Flexibility

83. Section 10 of the Act provides the Commission with authority to forbear from applying sections of the Act and its regulations to telecommunications carriers and services if the Commission determines that enforcement of the regulation or provision is not necessary to ensure just and reasonable charges, practices, classifications, and regulations; enforcement is not necessary for the protection of consumers; and forbearance is consistent with the public interest.[258] In the case of commercial mobile radio service (CMRS) providers, the Commission concluded that it was appropriate to forbear from Sections 203, 204, 205, 211, 212, and most applications of Section 214.[259] The Commission, however,

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[254]47 C.F.R. § 397(6)(A).

[255]47 C.F.R. § 397(6)(B).

[256]Implementation of Section 309(j) of the Communications Act -- Competitive Bidding for Commercial Broadcast and Instructional Television Fixed Service Licenses, *First Report and Order*, MM Docket No. 97-234, 13 FCC Rcd 15920, 16001 (1998).

[257]*Id.* at 16000.

[258]*See* 47 U.S.C. § 160(a)(1-3). Section 10 provides the Commission with authority to forbear from application of virtually any regulation or any provision of the Act to a telecommunications carrier or telecommunications service, or a class of carriers or services. However, the Commission may not forbear from applying the requirements of Sections 251(c) or 271 until it determines that those requirements have been fully implemented. *See* 47 U.S.C. § 160(d).

[259]*See* Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, *Second Report and Order*, 9 FCC Rcd 1411, 1463-93, ¶¶ 124-219, 272. Although the Commission recently concluded that, pursuant to Section 10(a)(3), forbearance from the international Section 214 application process would not be consistent with the public interest, we substantially streamlined the international 214 process, providing significant regulatory relief. *See* 1998 Biennial Regulatory Review -- Review of International Common Carrier Regulations, *Report and Order*, 14 FCC Rcd 4909, 4917 ¶ 18 (1999). *See also* Personal Communications Industry Association's Broadband Personal Communications Services Alliance's Petition for Forbearance For Broadband Personal Communications Services, Forbearance from Applying Provisions of the Communications Act to Wireless Telecommunications Carriers, *Memorandum Opinion and Order and Notice of Proposed Rulemaking*,

declined to forbear from enforcing other provisions, including Sections 201 and 202.[260] The Commission has also exercised its forbearance authority in permitting competitive access providers (CAPs) and competitive local exchange carriers (CLECs) to file permissive tariffs.[261] We seek comment regarding whether it is appropriate to forbear from enforcing any provisions of the Act or the Commission's rules with respect to Part 101 services.[262]

84. We also seek comment on whether the type of regulatory flexibility the Commission has permitted in other services is appropriate for Part 101 licensing. For example, 39 GHz band and MAS[263] licensees are permitted to conduct point-to-point, point-to-multipoint, or (upon the establishment of interference criteria) mobile operations.[264] In both instances, the Commission concluded that lifting the existing operational restrictions would enable providers to broaden the array of services they offer in order to respond to changing marketplace demands.[265] We seek comment on whether some or all other Part 101 licensees also should be permitted to provide such services. Commenters also should address whether such operational flexibility is permitted by Section 303(y) of the Act. Section 303(y) of the Act requires the Commission to make affirmative findings before permitting flexible use as part of the allocations process. Specifically, we are required to determine that such flexibility: (1) is consistent with international agreements; (2) would be in the public interest; (3) would not deter investment in communications services or systems, or technology development; and (4) would not result in harmful

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13 FCC Rcd 16857, 16914 ¶ 119 (released July 2, 1998) (*Forbearance Order*). *See also* Implementation of Section 402(b)(2)(A) of the Telecommunications Act of 1996; Petition for Forbearance of the Independent Telephone & Telecommunications Alliance, *Report and Order in CC Docket No. 97-11, Second Memorandum Opinion and Order in AAD, File No. 98-43*, 14 FCC Rcd 11364 (1999) (eliminating entry certification filing requirements under Section 214 and significantly streamlining exit certification requirements, granting the substance of the Section 214 regulatory relief requested by the members of the Independent Telephone and Telecommunications Alliance in their petition for forbearance, and extending that relief to all other domestic carriers).

[260]*See Forbearance Order, supra*, 13 FCC Rcd at 16864-16872 ¶¶ 14-31. The Commission also declined to forbear from applying Section 20.12(b) of the Commission's rules, which requires broadband personal communications service, cellular, and covered specialized mobile radio carriers, to permit unrestricted resale of their services until five years after the last group of initial licensees for broadband PCS is awarded. *Id.* at 44.

[261]*See* Hyperion Telecommunications, Inc. Petition Requesting Forbearance; Time Warner Communications Petition for Forbearance; Complete Detariffing for Competitive Access Providers and Competitive Local Exchange Carriers, *Memorandum Opinion and Order and Notice of Proposed Rulemaking*, 12 FCC Rcd 8596, 8608-10 ¶¶ 23-27 (1997).

[262]We note that we have sought comment on these same issues with respect to the 24 GHz band specifically. *See* Amendment to Parts 1, 2 and 101 of the Commission's Rules To License Fixed Services at 24 GHz, *Notice of Proposed Rulemaking*, WT Docket No. 99-327, FCC 99-333, ¶ 35, (rel. Nov. 10, 1999). In this proceeding, we seek to broaden the scope of our inquiry to Part 101 services generally.

[263]*See MAS Report and Order*, FCC No. 99-415 (rel. Jan. 19, 2000).

[264]*39 GHz Report and Order*, 12 FCC Rcd at 18613-15.

[265]*39 GHz Report and Order*, 12 FCC Rcd at 18614; *MAS Report an Order*, FCC No. 99-415 (rel. Jan. 19, 2000). at ¶ 101-105.

interference among users.[266]

V. PROCEDURAL MATTERS

A. Regulatory Flexibility Act

85. Appendix B contains a Final Regulatory Flexibility Analysis with respect to the *Memorandum Opinion and Order* and an Initial Regulatory Flexibility Analysis (IRFA) with respect to the *Notice of Proposed Rule Making*. As required by Section 603 of the Regulatory Flexibility Act of 1980, Pub. L. No. 96-354, 94 Stat. 1164, 5 U.S.C. §§ 601, *et seq.*, the Commission has prepared an IRFA of the expected impact on small entities of the proposals set forth in the *Notice of Proposed Rule Making*. We request written public comment on the IRFA. In order to fulfill the mandate of the Contract with America Advancement Act of 1996 regarding the Final Regulatory Flexibility Analysis, we ask a number of questions in our Initial Regulatory Flexibility Analysis regarding the prevalence of small businesses in the affected industries. Comments must be filed in accordance with the same filing deadlines as comments filed in this rule making proceeding, but they must have a separate and distinct heading designating them as responses to the IRFA. The Secretary shall send a copy of this *Memorandum Opinion and Order and Notice of Proposed Rule Making*, including the Final and Initial Regulatory Flexibility Analyses, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with Section 603(a) of the Regulatory Flexibility Act.

B. Ex Parte Rules -- Permit-But-Disclose Proceeding

86. This is a permit-but-disclose notice and comment rule making proceeding. Ex parte presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed as provided in Commission rules. *See generally* 47 C.F.R. §§ 1.1202, 1.1203, 1.1206.

C. Paperwork Reduction Analysis

87. This *Notice of Proposed Rule Making* contains either a proposed or modified information collection. As part of our continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to take this opportunity to comment on the information collections contained in this Notice, as required by the Paperwork Reduction Act of 1995, Pub. L. No. 104-13. Public and agency comments are due at the same time as other comments on this *Notice of Proposed Rule Making*; OMB comments are due 60 days from the date of publication of this *Notice of Proposed Rule Making* in the Federal Register. Comments should address:

- Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility.
- The accuracy of the Commission's burden estimates.
- Ways to enhance the quality, utility, and clarity of the information collected.
- Ways to minimize the burden of the collection of information on the respondents, including the

[266] 47 U.S.C. § 303(y).

use of automated collection techniques or other forms of information technology.

In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Judy Boley, Federal Communications Commission, 445 Twelfth St., S.W., Room 1-C804, Washington, D.C. 20554, or via the Internet to jboley@fcc.gov, and to Virginia Huth, OMB Desk Officer, 10236 New Executive Office Building, 725 Seventeenth Street, N. W., Washington, D.C. 20503, or via the Internet to vhuth@omb.eop.gov.

D. Comment Dates

88. Pursuant to Sections 1.415 and 1.419 of the Commission's Rules, interested parties may file comments on or before [30 days after publication in the Federal Register], and reply comments on or before [45 days after publication in the Federal Register].[267] Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies.[268] Comments filed through the ECFS can be sent as an electronic file via the Internet to <http://www.fcc.gov/e-file/ecfs.html>. Generally, only one copy of an electronic submission must be filed. If multiple docket or rulemaking numbers appear in the caption of this proceeding, however, commenters must transmit an electronic copy of the comments to each docket or rulemaking number referenced in the caption. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to ecfs@fcc.gov, and should include the following words in the body of the message: "get form <your e-mail address." A sample form and directions will be sent in reply.

89. Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appear in the caption of this proceeding, commenters must submit two additional copies for each additional docket or rulemaking number. All filings must be sent to the Commission's Secretary, Magalie Roman Salas, Office of the Secretary, Federal Communications Commission, 445 Twelfth St., S.W., TW-A325, Washington, D.C. 20554. Parties filing on paper are also encouraged to submit a copy of all pleadings on a 3.5-inch diskette in an IBM compatible form using Microsoft Word or compatible software.

90. Comments and reply comments will be available for public inspection during regular business hours in the FCC Reference Center, 445 Twelfth St., S.W., Room CY-A257, Washington, D.C. 20554. Copies of comments and reply comments are available through the Commission's duplicating contractor, International Transcription Services, Inc., 1231 20th Street, N.W., Washington, D.C. 20036, (202) 857-3800, FAX (202) 857-3805.

E. Ordering Clauses

91. Accordingly, IT IS ORDERED that, pursuant to the authority contained in Sections 4(i) and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i) and 303(r), and Section

[267] 47 C.F.R. §§ 1.415, 1.419.

[268] *See* Electronic Filing of Documents in Rulemaking Proceedings, *Report and Order*, GC Docket No. 97-113, 13 FCC Rcd 11322 (1998).

1.429 of the Commission's Rules, 47 C.F.R. § 1.429, the Petitions for Reconsideration, Petitions for Clarification, and other pleadings submitted in response to the *Part 101 Order* ARE GRANTED IN PART to the extent indicated herein AND ARE DENIED IN PART in all other respects.

92. IT IS FURTHER ORDERED that Parts 22, 24, 25, 74, 78, 90, and 101 of the Commission's Rules ARE HEREBY AMENDED as specified in Appendix C.

93. IT IS FURTHER ORDERED that the modifications to Part 101 of the Commission's Rules and Regulations as shown in Appendix C will become effective 60 days after publication in the Federal Register.

94. IT IS FURTHER ORDERED that, pursuant to the authority contained in Sections 1, 4(i), 7, 301, 303, 308, and 309(j) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 157, 161, 301, 303, 308, 332(a), and 332(c), this *Notice of Proposed Rule Making* in WT Docket No. 00-19 IS ADOPTED.

95. IT IS FURTHER ORDERED that the Commission's Office of Public Affairs, Reference Operations Division, SHALL SEND a copy of this *Memorandum Opinion and Order and Notice of Proposed Rule Making*, including the Final and Initial Regulatory Flexibility Analyses, to the Chief Counsel for Advocacy of the Small Business Administration.

96. IT IS FURTHER ORDERED that the proceedings in WT Docket No. 94-148, CC Docket No. 93-2, and RM-7861 ARE HEREBY TERMINATED.

F. Contacts for Information

97. For further information on this matter contact Michael J. Pollak or Edgar Class, Policy and Rules Branch, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau, at (202) 418-0680. TTY (202) 418-7233.

98. Alternative formats (computer diskette, large print, audio cassette, and Braille) are available to persons with disabilities by contacting Martha Contee at (202) 418-0260, TTY (202) 418-2555, or via e-mail to mcontee@fcc.gov. This *Memorandum Opinion and Order and Notice of Proposed Rule Making* can be downloaded at http://www.fcc.gov/Wireless/Orders/2000/fcc0033.txt.

FEDERAL COMMUNICATIONS COMMISSION

Magalie Roman Salas

Magalie Roman Salas
Secretary